

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: LUMARK

Report Number: P459871

Luminaire Tested: **NAV-SA5A-AMB-U-SL4**

Issue Date: 1/6/2021

Test Information

Test Method: LM-79-08
Report Number: P459871
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2003-697-18)
Test Lab: INNOVATION CENTER
Issue Date: 1/6/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SA5A-AMB-U-SL4
Description: NAVION AREA AND ROADWAY LUMINAIRE
(5) NARROW BAND AMBER, 500mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5110 lumens
Efficiency: N/A
Efficacy: 50.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G3

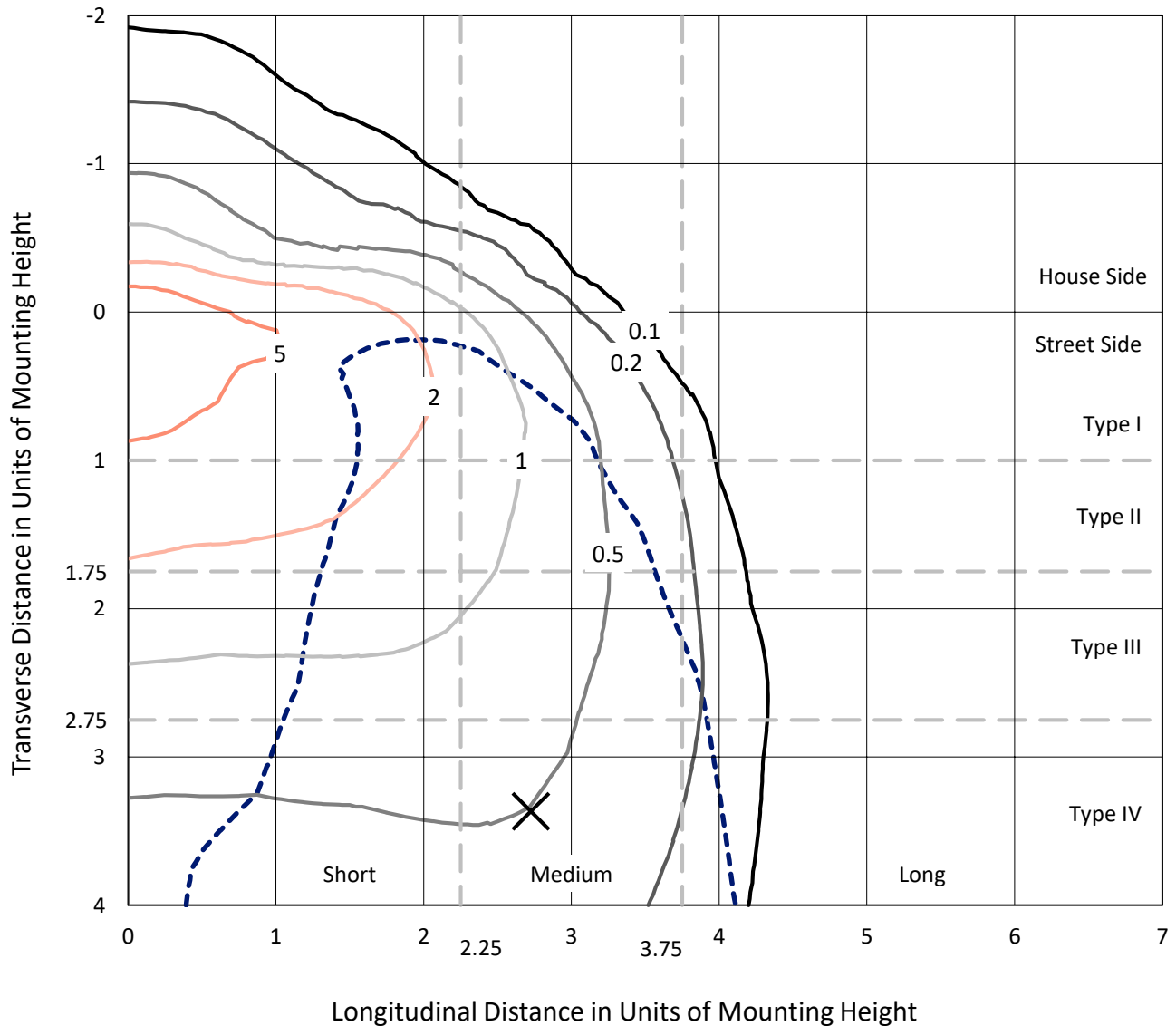
Input Watts (W): 101
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P459871
 CATALOG NUMBER: NAV-SA5A-AMB-U-SL4

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

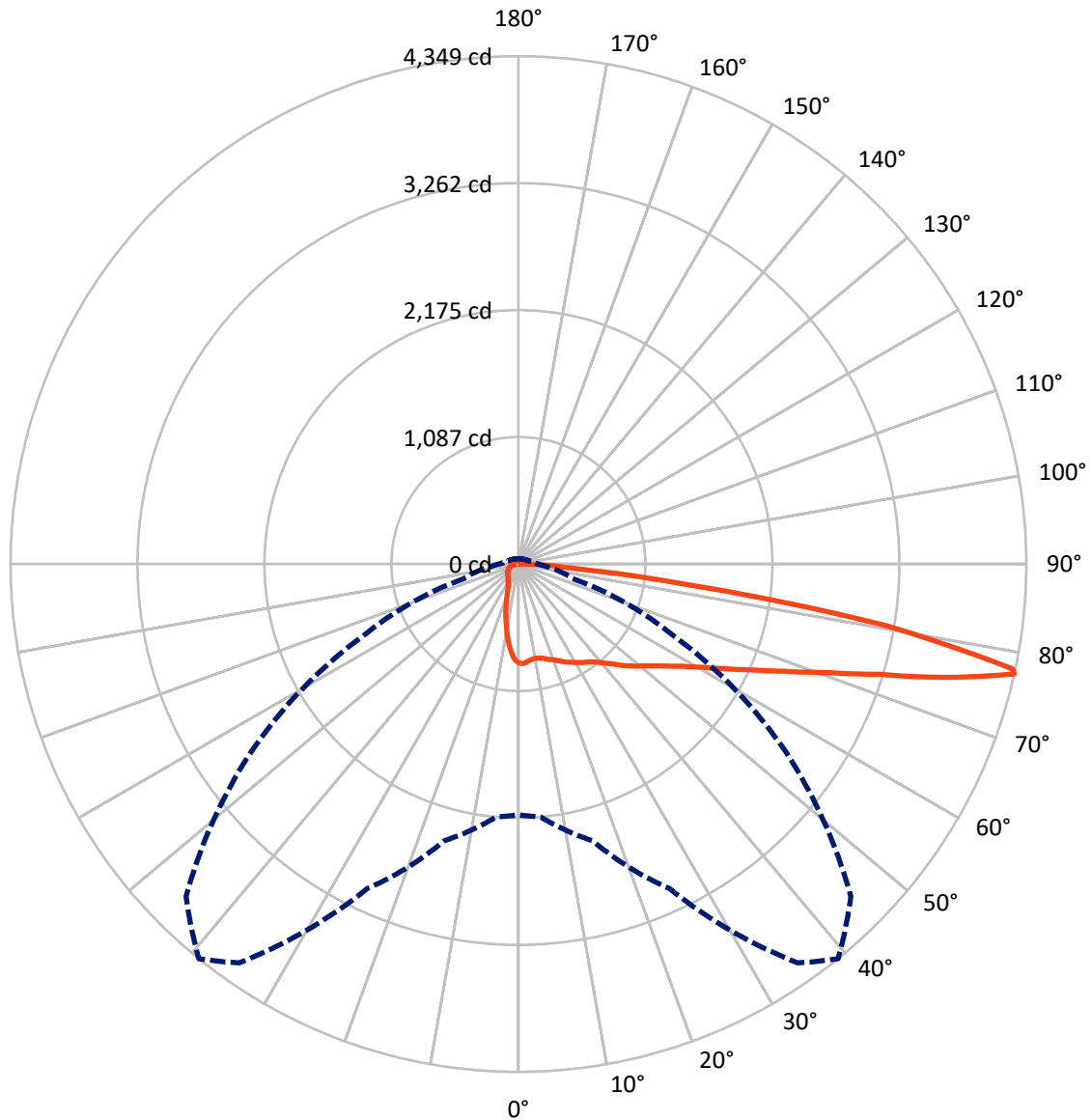


Based on 10 foot mounting height. Maximum calculated value = 8.5 fc
 Type IV - Medium - Non-Cutoff

REPORT NUMBER: P459871

CATALOG NUMBER: NAV-SA5A-AMB-U-SL4

Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 77-Deg Vertical

REPORT NUMBER: P459871

CATALOG NUMBER: NAV-SA5A-AMB-U-SL4

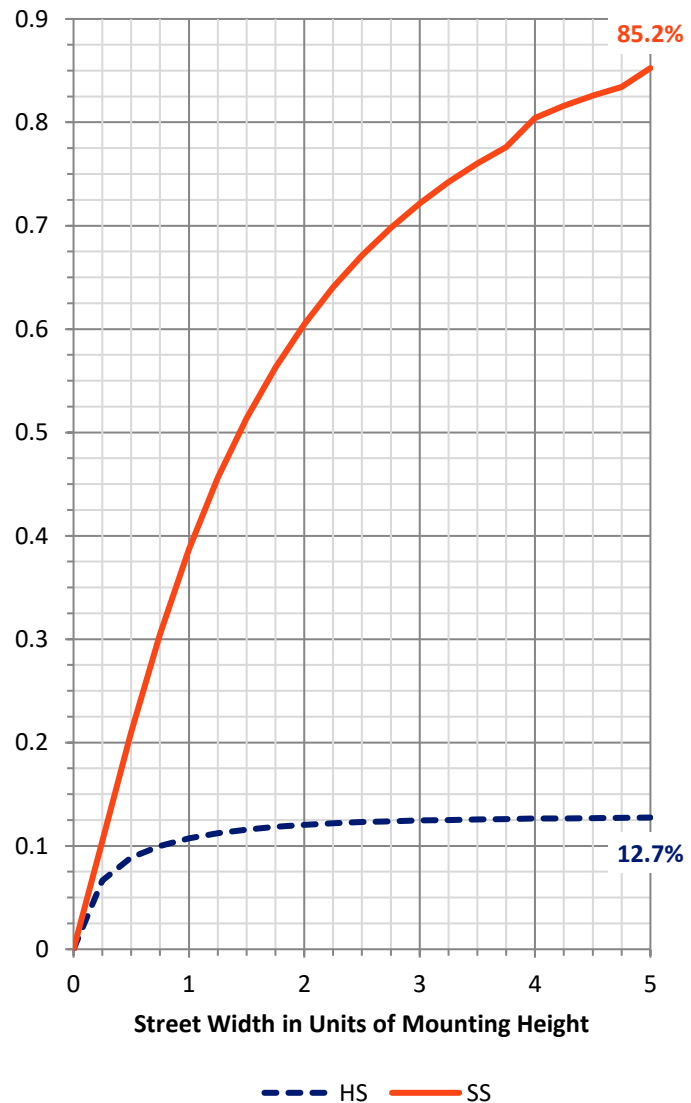
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	659.3	0.0	659.3
	% Fixture	12.9	0.0	12.9
Street Side	Lumens	4450.7	0.0	4450.7
	% Fixture	87.1	0.0	87.1
Total	Lumens	5110.0	0.0	5110.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.2	1.5
10°-20°	186.1	3.6
20°-30°	284.3	5.6
30°-40°	408.9	8.0
40°-50°	593.6	11.6
50°-60°	852.1	16.7
60°-70°	1173.6	23.0
70°-80°	1266.3	24.8
80°-90°	270.9	5.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	5110.0	100.0
0°-180°	5110.0	100.0

Coefficient of Utilization



REPORT NUMBER: P459871

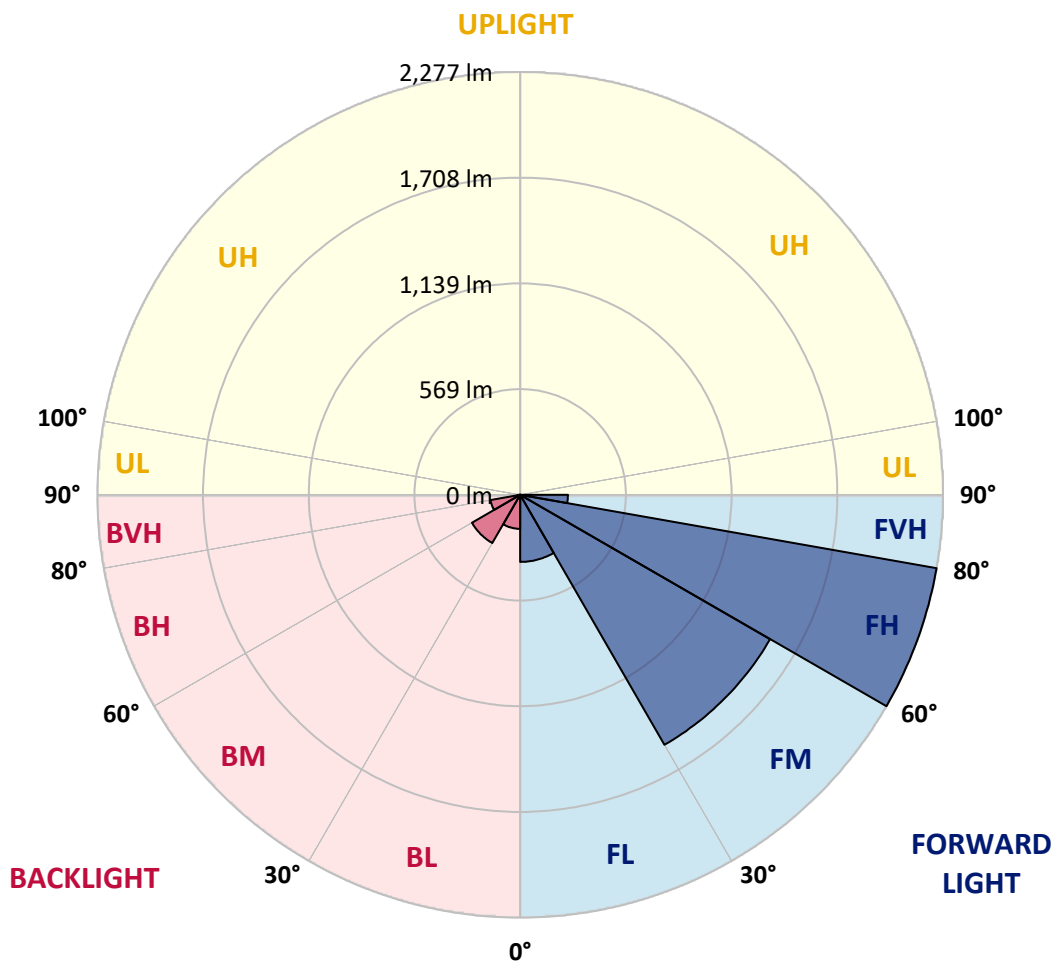
CATALOG NUMBER: NAV-SA5A-AMB-U-SL4

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	361.4	7.1			
FM (30°-60°)	1554.6	30.4			
FH (60°-80°)	2277.5	44.6			G2/5000
FVH (80°-90°)	257.3	5.0			G3/500
BL (0°-30°)	183.2	3.6	B1/500		
BM (30°-60°)	300.1	5.9	B1/1000		
BH (60°-80°)	162.4	3.2	B1/500		G1/500
BVH (80°-90°)	13.6	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Medium





REPORT NUMBER: P459871

CATALOG NUMBER: NAV-SA5A-AMB-U-SL4

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	849.2	849.2	849.2	849.2	849.2	849.2	849.2	849.2	849.2	849.2	849.2
2.5°	858.3	851.5	851.5	858.3	853.8	853.8	849.2	853.8	849.2	844.6	849.2
5°	846.9	842.3	840.0	846.9	842.3	837.7	842.3	840.0	837.7	828.5	828.5
7.5°	826.2	821.6	821.6	828.5	830.8	823.9	826.2	828.5	821.6	812.4	814.7
10°	807.9	805.6	810.1	819.3	823.9	819.3	823.9	821.6	812.4	803.3	801.0
12.5°	794.1	791.8	798.7	817.0	826.2	826.2	828.5	821.6	814.7	803.3	794.1
15°	784.9	784.9	798.7	821.6	835.4	840.0	842.3	837.7	821.6	805.6	794.1
17.5°	789.5	787.2	805.6	833.1	849.2	860.6	860.6	853.8	833.1	812.4	798.7
20°	801.0	796.4	819.3	853.8	874.4	876.7	881.3	867.5	846.9	823.9	807.9
22.5°	805.6	817.0	842.3	881.3	892.8	899.7	899.7	885.9	856.1	840.0	821.6
25°	842.3	844.6	874.4	908.8	920.3	929.5	924.9	895.1	869.8	860.6	844.6
27.5°	881.3	883.6	913.4	938.7	945.6	952.4	954.7	913.4	888.2	885.9	865.2
30°	915.7	924.9	954.7	973.1	973.1	980.0	977.7	941.0	913.4	918.0	897.4
32.5°	975.4	973.1	1002.9	1005.2	993.8	1005.2	1005.2	963.9	945.6	966.2	934.1
35°	1025.9	1035.1	1048.8	1037.4	1021.3	1030.5	1035.1	996.0	986.9	1028.2	993.8
37.5°	1094.7	1087.8	1094.7	1074.1	1051.1	1062.6	1074.1	1039.7	1044.2	1103.9	1060.3
40°	1147.5	1136.0	1140.6	1113.1	1090.1	1113.1	1124.6	1092.4	1113.1	1209.5	1156.7
42.5°	1191.1	1181.9	1172.8	1156.7	1138.3	1168.2	1186.5	1161.3	1204.9	1326.5	1276.0
45°	1221.0	1214.1	1200.3	1198.0	1200.3	1237.0	1260.0	1239.3	1299.0	1473.4	1409.2
47.5°	1239.3	1232.4	1234.7	1239.3	1257.7	1305.9	1347.2	1326.5	1422.9	1627.2	1535.4
50°	1264.6	1253.1	1255.4	1294.4	1321.9	1372.4	1439.0	1429.8	1556.0	1790.1	1673.1
52.5°	1296.7	1278.3	1278.3	1347.2	1390.8	1448.2	1533.1	1544.6	1693.7	1957.7	1813.1
55°	1349.5	1326.5	1310.5	1404.6	1480.3	1542.3	1641.0	1691.4	1842.9	2132.1	1941.6
57.5°	1406.9	1383.9	1358.7	1478.0	1579.0	1652.4	1764.9	1838.3	2012.8	2288.2	2033.4
60°	1496.4	1455.1	1429.8	1572.1	1716.7	1792.4	1930.1	2024.2	2191.8	2430.4	2116.0
62.5°	1560.6	1528.5	1521.6	1691.4	1886.5	1973.7	2104.6	2203.2	2357.0	2568.2	2187.2
65°	1627.2	1608.8	1611.1	1820.0	2088.5	2184.9	2327.2	2432.7	2570.4	2694.4	2194.1
67.5°	1721.3	1702.9	1741.9	1976.0	2322.6	2448.8	2593.4	2685.2	2772.4	2715.0	2070.1
70°	1845.2	1822.3	1893.4	2164.2	2614.1	2777.0	2942.2	3040.9	2871.1	2643.9	1673.1
72.5°	1973.7	1957.7	2074.7	2432.7	3022.6	3231.4	3419.6	3364.5	2919.3	2267.5	1090.1
75°	2129.8	2134.4	2322.6	2779.3	3674.4	3874.0	4032.4	3488.5	2464.9	1340.3	415.4
77°	2148.2	2173.4	2453.4	3068.5	4170.1	4349.1	4025.5	2786.2	1482.6	479.7	234.1
77.5°	2072.4	2095.4	2423.6	3109.8	4229.8	4328.4	3899.3	2602.6	1188.8	385.6	206.6
80°	1544.6	1521.6	1879.6	2593.4	3399.0	3197.0	2334.1	1009.8	346.6	199.7	126.2
82.5°	610.5	651.8	879.0	1278.3	1661.6	1459.6	874.4	440.6	208.8	107.9	52.8
85°	282.3	302.9	330.5	339.7	429.2	442.9	328.2	408.5	151.5	50.5	32.1
87.5°	206.6	215.7	243.3	215.7	208.8	197.4	241.0	445.2	75.7	29.8	16.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P459871

CATALOG NUMBER: NAV-SA5A-AMB-U-SL4

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	849.2	849.2	849.2	849.2	849.2	849.2	849.2	849.2	849.2	849.2	849.2
2.5°	842.3	835.4	837.7	835.4	830.8	826.2	821.6	817.0	819.3	819.3	812.4
5°	823.9	814.7	810.1	798.7	784.9	771.1	755.1	743.6	734.4	729.8	734.4
7.5°	805.6	794.1	784.9	757.4	734.4	695.4	670.2	635.7	631.1	626.5	622.0
10°	791.8	782.6	759.7	722.9	674.7	628.8	571.5	534.7	511.8	498.0	502.6
12.5°	782.6	771.1	734.4	677.0	615.1	546.2	482.0	433.8	406.2	387.9	383.3
15°	780.3	759.7	706.9	631.1	548.5	470.5	406.2	348.8	305.2	291.5	286.9
17.5°	780.3	752.8	681.6	582.9	486.5	399.3	328.2	275.4	238.7	224.9	220.3
20°	784.9	750.5	651.8	534.7	424.6	328.2	266.2	222.6	202.0	192.8	192.8
22.5°	791.8	748.2	619.7	482.0	364.9	275.4	220.3	195.1	185.9	179.0	179.0
25°	805.6	745.9	592.1	433.8	312.1	236.4	197.4	181.3	172.1	169.8	169.8
27.5°	823.9	748.2	564.6	387.9	263.9	208.8	181.3	172.1	167.5	165.2	165.2
30°	842.3	752.8	534.7	337.4	229.5	188.2	169.8	162.9	160.7	158.4	158.4
32.5°	862.9	757.4	500.3	296.1	204.3	172.1	160.7	156.1	156.1	153.8	151.5
35°	897.4	766.5	461.3	257.0	183.6	160.7	153.8	149.2	149.2	146.9	146.9
37.5°	945.6	778.0	422.3	229.5	169.8	151.5	144.6	144.6	142.3	142.3	140.0
40°	1016.7	810.1	390.2	206.6	158.4	144.6	140.0	137.7	137.7	135.4	135.4
42.5°	1097.0	849.2	360.3	190.5	151.5	137.7	133.1	133.1	133.1	130.8	128.5
45°	1191.1	885.9	332.8	179.0	144.6	133.1	128.5	128.5	126.2	123.9	123.9
47.5°	1292.1	931.8	314.4	172.1	142.3	130.8	126.2	121.6	121.6	119.3	119.3
50°	1393.1	970.8	298.4	167.5	140.0	126.2	121.6	119.3	117.0	112.5	112.5
52.5°	1489.5	1012.1	293.8	162.9	135.4	123.9	117.0	114.8	112.5	107.9	107.9
55°	1572.1	1060.3	298.4	160.7	133.1	119.3	112.5	110.2	107.9	103.3	103.3
57.5°	1631.8	1085.6	300.7	160.7	130.8	112.5	105.6	107.9	103.3	101.0	101.0
60°	1693.7	1108.5	298.4	160.7	128.5	105.6	98.7	103.3	101.0	98.7	98.7
62.5°	1735.1	1099.3	286.9	160.7	126.2	101.0	94.1	101.0	103.3	98.7	101.0
65°	1675.4	996.0	252.5	156.1	126.2	96.4	87.2	98.7	105.6	103.3	103.3
67.5°	1459.6	752.8	211.1	146.9	121.6	94.1	80.3	89.5	98.7	96.4	98.7
70°	1035.1	454.4	174.4	130.8	110.2	89.5	75.7	75.7	78.0	80.3	82.6
72.5°	537.0	247.9	142.3	114.8	96.4	80.3	68.9	64.3	64.3	64.3	66.6
75°	236.4	162.9	117.0	94.1	80.3	68.9	62.0	55.1	55.1	52.8	52.8
77°	165.2	128.5	96.4	78.0	66.6	57.4	55.1	48.2	48.2	45.9	45.9
77.5°	149.2	119.3	94.1	73.4	64.3	55.1	52.8	45.9	45.9	45.9	45.9
80°	101.0	94.1	71.1	55.1	50.5	43.6	41.3	39.0	36.7	36.7	36.7
82.5°	59.7	68.9	50.5	39.0	36.7	32.1	29.8	29.8	29.8	27.5	25.2
85°	36.7	50.5	32.1	25.2	25.2	20.7	20.7	18.4	18.4	16.1	16.1
87.5°	16.1	32.1	18.4	11.5	9.2	6.9	9.2	6.9	6.9	4.6	6.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)